REMARKS

ON THE

MONTREAL HARBOR

AND THE

LACHINE CANAL,

BY

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THE HARBOR OF MONTREAL AND THE LACHINE CANAL.

When De Witt Clinton first projected the Erie Canal, about the year 1819, he was denounced as a visionary and a mad theorist for expressing his opinion of the commerce which would flow through it. Yet only two years elapsed after its completion, in 1825, before it became evident that the canal was too small, and that its enlargement was an imperative necessity. At that time it accommodated boats of seventy-eight tons average, and has since been enlarged for the use of boats of two hundred and ten tons. By this enlargement the cost of transport between Buffalo and Albany was reduced about seventy-five per cent. In Canada, the first canals were constructed with locks of nineteen feet; these were enlarged to twenty-four feet, and the canals of the St. Lawrence constructed to overcome the rapids between Lake Ontario and Montreal, have locks of forty-five and fifty-five feet, and two hundred in length, with a depth of water of nine feet. The key of the whole existing St. Lawrence route is, however, the Welland Canal. This canal had originally locks of nineteen feet, which were afterwards enlarged to, unfortunately, only twenty-six feet; and while the other canals on the St. Lawrence can pass vessels through of about seven hundred and fifty tons, the Welland Canal only admits vessels of three hundred and fifty tons. The great mistake, therefore, which the engineers of Canada, and of the State of New York, originally made was the INADEQUATE VIEW OF THE FUTURE TRADE, for which their public works were designed, and NOT ADAPTING THEM TO THAT FUTURE. But while this state of things cannot now be altered, the same responsibility rests upon the Government of Canada, and upon Government engineers, in providing for cheaper transportation, and greater facilities for the present and future trade, as rested upon those who have preceded them.

For many years before the union of the Provinces, the question of the improvement and enlargement of our whole Canal system occupied the public mind in Canada; and the

anxiety felt on this subject, procured the adoption of the sixty-ninth resolution of the Quebec Conference for Confederation of the Provinces, which reads as follows:

"The communication with the North-Western Territory, and the improvements required for the development of the trade of the Great West with the Seaboard, are regarded by this Conference as subjects of the highest importance to the Federated Provinces, and shall be prosecuted at the earliest possible period that the state of the finances will permit."

This resolution was adopted in 1864, yet it is only *now* that, under the present Government, active measures are being taken to secure canal enlargement, and to adapt the artificial to the natural navigation of the St. Lawrence route. In the possession of the St. Lawrence River the people of Canada have actually the power of directing and controlling the route of interior commerce. It is a truth beyond all controversy that Canada, by the formation of the country, has not only greater natural facilities for the best line of transport for the carrying trade of the Western and Northern States to the Ocean ship at Quebec or Montreal, but has also the best line to New York and the New England States. The dilatory and tardy course of action of the late Government of Canada, by allowing nine years to pass over, after the meeting for confederation in 1864, without an attempt to adapt our artificial to the natural navigation of our lakes and rivers, has been fraught with danger to our commerce, and to our power of competing successfully with our enterprising neighbors as well as to the full development of the great resources which we possess, in attracting through our waters and over our railways, the commerce of the interior. It is because I believe that the public have a right to demand that our public men should devote a large portion of their care in perfecting our canals, and in cheapening transportation to the fullest extent, that I now write on the Harbor of Montreal, the Lachine Canal, and their improvement. The present Ministry deserve the utmost credit for the vigor they have displayed in the effort they are now making to enlarge the canals and to improve the navigation inland from the seaports to their greatest capacity.

In the means to effect this, all Ministries or Governments have to be guided largely by their engineers, and the character of the improvements to be effected, greatly depends on the mental

comprehensiveness of those engineers as to the trade and commerce for which public works are constructed. We have, as stated, seen the proof of this, in the construction of the canals of the State of New York, to accommodate the Western trade, which were scarcely completed, when they were found inadequate and had to be enlarged to more than double their capacity, and *now* another enlargement is urgently pressed on the attention of the Government of that State, as a matter of imperative necessity, not only for the object of cheapening transport, but also by the fear that, unless enlargement to double the present capacity of canals is made, the trade of the West will find other channels than through the Erie Canal from Buffalo and Oswego, nor will the State hesitate in removing all Tolls to secure the trade. I refer to these facts for the purpose of showing how far the engineers of that State were deficient in designing works adapted to even the present trade.

In Canada we have also abundant evidence of the farthing-candle policy which has been pursued by our Government engineers. They, no doubt, at the time, believed they were giving the best advice they could to the Government, as were the engineers of the State of New York; but the result of this, in the short period of twenty years, ought to be a matter of serious consideration as to the soundness of the policy now being pursued by the Government of Canada under the advice of their engineers, in improving and enlarging the Lachine Canal.

The necessity which existed for overcoming the heavy charges on transport from Prescott to Montreal, induced the most energetic efforts to be made to provide a remedy in constructing canals. Previous to 1800 four short canals were constructed to avoid the Cascade rapids and were located on the north side, at "Faucille," "Trou de Moulin," at the Cedars, and at "Split Rock." The locks were six feet wide and had a depth of two and a half feet and passed boats carrying thirty barrels of flour. In 1817 the locks were enlarged so that Durham boats could pass through carrying one hundred barrels. In 1833 Government ordered surveys of the Beauharnois Canal, and against the advice of Mr. Mills, an American engineer, the work was begun on the south side of the river instead of the north side, and was completed in 1845. All the other canals below Prescott are on the north side of the river, and were completed and open-

to the trade before 1849, with locks two hundred feet long, nine feet deep, and forty-five feet wide, except the "Cornwall," which has locks fifty-five feet wide. The Lachine Canal was begun with locks of twenty feet wide and a depth of four and a half feet; but I shall again refer to this in its connection with the "Montreal Harbor." The Welland Canal was begun in 1824, and in 1829 the first vessels passed through. The locks were twenty-two feet, by seven feet deep. The work was enlarged and begun in 1843, with locks of twenty-six feet width and nine feet depth, while some of the locks were made forty-five feet in width, and in length varying from one hundred and fifty to two hundred and thirty feet. It is now proposed, and contracts have, I believe, been given out for the uniform enlargement of the locks to two hundred and seventy feet, by forty-five feet wide, with twelve feet on the mitre sills. The contracts for the St. Lawrence Canals have not yet been given out, but I presume all of these canals are intended to be of the same size as the Welland.

I wish now to point out, that the Lachine Canal ought to be viewed in a different aspect from any of the other canals, and as that eminent engineer, Walter Shanly, Esq., lately said, "Whilst touching the improvement of the navigation between Kingston and Montreal, I would note that the Lachine Canal, having to serve the trade of both rivers (St. Lawrence and Ottawa)—a different mode of treatment from what may be properly applicable to the other links in the chain—should therefore be 'contrived a double debt to pay', by giving it additional width and duplicated locks. Under present circumstances it is my opinion that when the subject is carefully examined, the Lachine Canal has an intimate and close connection with the improvement of *the Harbor of Montreal*."

Ocean vessels now ascend the St. Lawrence to the Port of Montreal, nine hundred and eighty-six miles above the Straits of Belle-Isle. Immediately above Montreal, the St. Louis Rapids occur, which bar the ascent of the river. The necessity of surmounting these gave rise to the construction of the Lachine Canal. The first step taken towards its construction was in 1815, when the Legislature granted its promoters aid. Nothing, however, was done till 1819, when a bill was passed incorporating a company with a capital of $600,000. An engineer from England was employed, but nothing was done, and in 1821 the

Government repealed the previous Act, and ordered its construction as a Provincial work. A Commission was appointed, and the plans prepared by Mr. Thomas Burnet, an English engineer, were adopted, and ground was broken at Lachine on the 17th July, 1821. It has been urged that if the canal had been extended to some two and a quarter miles below its present terminus, that is to say, to the foot of the current St. Marie, it would then have opened into a fine sheet of still water, and, consequently, that the whole Port of Montreal, instead of lying as it now does, in a current which is almost a rapid, would have possessed a more eligible position. In reference to this it may be said that the first projectors of the canal had intended to place the terminus at the foot of the current St. Marie, with a branch running from the main line to a point in the river near the present entrance; but the prices asked for the land were at the time considered so exorbitant that it was deemed necessary to change the location. The importance, however, of continuing the canal to the lower terminus, was so apparent, that two years later, viz., in 1823, an Act of Parliament was obtained directing that measures should be taken to ascertain the value of the land required; in obedience to this Act the Canal Commissioners appointed Messrs. Julius Quesnel and Thomas Phillips, Commissioners, to obtain the required information.

These gentlemen reported that the proposed extension would pass through eighty-seven different properties, that the value of the land amounted to $50,183, and the houses to $15,284, making in all $65,472, and strongly urged the purchase of the land and houses, with a view to the future extension of the canal—but this suggestion was not carried out.

In 1825 vessels first passed through the twenty feet locks to the city from Lachine. In 1841 the Government Engineers, after deliberating on the expediency of adopting a new location for the Lachine Canal, finally came to the conclusion to retain the old one.

This canal (as at present) had locks of 200 feet by forty-five feet, with nine feet of water, and was opened to commerce in 1848.

Such is a brief history of the Lachine Canal, and fully bears out the want of that engineering foresight as to the future trade and to suggest a plan of the canal adapted to that future. As already stated, Government, under the advice of its engineers, are

again about to enlarge the Lachine and the other St. Lawrence Canals with locks of 270 feet by forty-five feet wide, and twelve feet of water.

The success of those enlarged canals, including the Welland Canal, in yielding an ample return in tolls, for the money expended and in cheapening transport, is largely dependent on the character of the navigation for ocean ships below Montreal, and of their connection with Lake Champlain and the Hudson River.

It is of the utmost importance to the whole Dominion that the ocean ship should water bear her cargo as far inland as possible without breaking bulk, and in the same sense, it is equally important that such large steamers and other vessels, as now trade to New York, should also be able to come from sea inland with cargo, and take away cargo, without transhipment, at the lowest stage of water. Under this view, the Government, as early as 1830, were urged to deepen Lake St. Peter and the river below Montreal from eleven feet at lowest water to fourteen feet. Chas. Atherton, an experienced civil engineer from the Clyde, was employed to survey and report on the work. This he did in 1843, and advised the improvement of the natural channel through Lake St. Peter, although somewhat crooked. The Government engineers, however, differed with him, and ordered work to proceed in a straight line through the Lake. Mr Atherton refused to do this and left Government employ. After dredging three seasons the work was abandoned in 1846 by the Government, after an expenditure of some $400,000, and without any result. It was subsequently, in 1850, carried on by the Harbor Commissioners of Montreal until the channel was made navigable in 1866, as it is now, for ships drawing twenty feet at lowest water. The Commissioners are now engaged in further deepening the channel to twenty-five feet at lowest water. This depth will allow steamers of 5,000 tons to come to the entrance of the Lachine Canal at Montreal, fully loaded from sea, and take away full cargoes.

With the Welland and the St. Lawrence Canals improved as proposed, inland steam propellers of 1,000 tons burthen can thus, without breaking bulk, sail from Lake Superior or other lakes, to Montreal and there meet the 5,000 ton ocean ship for transfer of cargo, and there load back with return cargo. In our short seasons, it is highly important—so far as profits are con-

cerned—that these inland propellers should have as little detention as possible in discharging and taking in cargo, for the profits will consist largely in the number of trips they can make during the season of navigation. Some may say, why deepen the St. Lawrence at all, between Quebec and Montreal? There is ample water at Quebec, and why should not the steam propeller from the west proceed on to Quebec? The reason is, that the vessel of 1,000 tons cannot carry freight as cheap as the ship of 5,000 tons, and if such a ship can be brought here and if ample accommodation is provided at Montreal for the rapid discharge of the cargo of this ocean steamer from sea, and of taking in her cargo, it is evident that it will be for the interest of the smaller vessel to transfer her cargo into the large ship, and get back again to the interior for another.

The question then arises, How are these facilities to be provided, and what are the Government engineers' opinions on the matter? The question is of great importance, and affects every one. It is of as much importance to the farmer as to the merchant, and as stated in the letters of "A Western Trader," published and written by me at Milwaukee, in 1863, and referred to by the Chief Engineer of the Public Works, in his last Report: "Whether exported to Europe or to other countries, or consumed in the Eastern States, the great and important principle remains, that the price the western producer or farmer gets for his wheat or other grain, is the price it sells for in the consuming market, less the charges of transport, handling, &c., no matter whether that market be in Europe, Canada or the Eastern States, and every cent that can be saved in that transport is so much added to the value of every bushel of grain now produced or will ever be produced in these grain-growing States of the North-West."

It is a question which I think deeply affects the interests of Canada, and which does not command adequate attention. There is no doubt that the northern route through the St. Lawrence, if properly improved, is the best. This has been lately acknowledged by a Canal Commissioner of New York, as it has been by United States engineers. Nature has been lavish to Canada, and all that is now wanted is for art to aid what nature has given, in adapting our rivers, harbors, and canals, so as to create every facility and to perfect the navigation in every possible way. This done, I believe that such reductions in the cost of transportation

can be made, both in our internal forwarding and in our outward and inward freight, by the ocean ship in every possible way, as will enable us to compete successfully with New York, Boston, Baltimore or Philadelphia for western trade.

One great point at issue in this matter is, the outlet of the Lachine Canal at Montreal, and can that outlet ever be in Hochelaga Bay? I was so thoroughly convinced that a grave mistake had been made by the engineers of the time in locating the outlet of the Lachine Canal where it now is, that in 1852, while a Harbor Commissioner, I succeeded in having Messrs. T. C. Keefer and C. S. Gzowski named as a commission on harbor improvements and to report "on the propriety of examining the ground lying between the foot of the current and the Lachine Canal, at or near the St. Gabriel Locks, with the view of considering whether it is not now possible in constructing a ship canal to connect these points, thus affording the means of building warehouses on each side of the canal, and when such works are completed, the same could be disposed of for the erection of storehouses," &c. These gentlemen did not doubt the possibility on a survey of effecting my object, but it was too late! "The cost of purchasing houses, &c., would be enormous; over five millions of dollars instead of $65,472; it would interfere with the drainage and sewerage of the city; it would cut off the whole of the system of gas and water pipes, placing the business portion of the city upon an island, and to give sufficient width to moor vessels on either side without obstructing the centre channel, a great width must be excavated, and some difficulty would be found in getting rid of this large amount of excavation," &c., &c.

Whatever, therefore, may be the result, no one can now doubt that the Lachine Canal never can be placed lower on the St. Lawrence than where its present outlet is.

As to the Montreal Harbor, various schemes have been suggested for its improvement. Should the Harbor Commissioners succeed in their effort to secure a twenty-five foot channel to Quebec at low water, then as there are no berths in the Harbor above St. Helen's Island, where there is a greater depth of water than twenty feet, and but few of these, it follows that without other improvements, large steamers of the 5,000 tons referred to, must go to Hochelaga bay to discharge inward and take in

outward cargo, in which case it may be found more advantageous for the Western propeller to go to Quebec.

Other vessels, local steamers and local craft, trading to Europe, the West Indies, and to the Maritime Provinces, will require in a short time all the berth room which now exists, and except in a few places the wharves now existing would be endangered by dredging to a greater depth near to them. The narrowness of the channel of 300 feet opposite the city, prevents the wharves from being extended outwards. These considerations were referred to three distinguished American engineers in 1858, who recommended the construction of docks below the Victoria Bridge, as the best means of providing ample accommodation for the largest class of ships. This plan had been previously recommended by Messrs. T. C. Keefer and C. S. Gzowski, as well as by Charles Legge, Esq. In 1859, I find that the Harbor Commissioners submitted the question to Walter Shanly, Esq., and requested his opinion as to how "the Grand Trunk Railway should extend their rails to a central point within the city, and connect them with the wharves in such a manner as will best subserve the general interests of the citizens and the trade of the country."

Mr. Shanly recommended the south side of the canal at Windmill Point, and opposite to McGill street, as a freight station for the Grand Trunk Co., and the foot of McGill street as a passenger station. This suggestion, as to the freight station, was accepted by the Commissioners, by the city authorities, by the Board of Trade and by the Corn Exchange Association, and an agreement was signed by the late Mr. Blackwell on the part of the Grand Trunk, and by the Harbor Commissioners, that it was the best point for a freight station, and should be carried out.

The engineers of the Government, however, at a later period differed from this. The Lachine Canal, above the first locks, is daily crowded with vessels and boats of all kinds, requiring to lock down into the Harbor, and delays of three and often four hours are not infrequent in getting through. Under these circumstances, the engineers of the Government advised, and the Government consented to, the construction of two locks on the site of the old canal, and parallel with the locks now in use, as a means of remedying the delay complained of, and obviating all difficulty in the future. The Harbor Commissioners had spent upwards of $200,000 in enclosing the space below the old

Wind-mill by wharves and in filling it up, and no objection to doing so was ever made by the Government in power, while by all interests, as I have shewn, it was deemed the most suitable freight station to which the Grand Trunk Railway could have access through Mill street, without passing across the various streets of the city. The space thus filled up and prepared for wharves by the Harbor Commissioners was taken possession of by the Public Works Department without ever asking the leave of the Commissioners, and the extensive work of making the two new locks, with their approaches, is now going on. By Mr. Sippell's late report to the Minister of Public Works, the cost of the work will be $1,900,000, and, although the mistakes have been great in the past, this I think will be the most expensive and the greatest. The space from the first lock up to Grant & Hall's Mill, is 1300 feet. The width of the canal for that distance is from 275 to 285 feet wide. On the one side of this length are the various mills and factories, and on the other side of the canal are the storehouses. These can never be disturbed, nor can this space be widened except at enormous cost, by the purchase of the mills and factories, or by the removal of the street and storehouses on the opposite side. When even one steamer now lies on each side of the canal, taking in or discharging cargo, there is only 190 feet left; and if, as I have stated, there are delays of three and four hours in getting into and from the Harbor, when the capacity of the canals is only for vessels of 350 tons, what will be the delay when the canals are adapted for vessels of 1000 tons without any other outlet to the ocean ship in the harbour? These new locks, and the enlargement of the Lachine Canal are, by the late Chief Engineer's Report, the only measures projected or advocated to accommodate the trade of the great future at Montreal. The Report of the Public Works for 1867, states that, in 1847, it was decided to lease the surplus water on the canals for manufacturing purposes, and, up to 1860, leases were granted to drive 104 runs of mill stones. The Report states that this leasing of water power on the canals is questionable," " for there are drawbacks." "One of the greatest of these is the increased current created in the canal, and the consequent inconvenience to vessels passing through. *This inconvenience is so much felt at the present time* (1867) *that the evil far outweighs all the advantages, yet how much more must it be as the traffic through the canal increases!*"

The facilities afforded to commerce by mills and factories, so situated as on canal basins or docks to be accessible to shipping is undeniable; but it is equally clear that it is most desirable *that water power should be drawn from other sources than the canal itself.* Arrangements for furnishing this supplementary water power could be made with more or less facility in nearly all the St. Lawrence canals; "*but no where is the execution of works on a large scale to effect this object of such paramount importance as at Montreal, owing to the commanding position of this centre of commerce, forming as it does the connecting link between the ocean and the inward lake shipping, besides being, with the aid of the Victoria Bridge, the grand junction of our railway system.*"

In the Public Works Report of 1864 the Hon. Mr. C. Chapais said that "*the time had arrived for the preparation and adoption of such a well matured design for a terminus of our canal system on such a scale as the development of our commerce has shown to be imperative.*"

"*The great consideration of such a terminus is, that ocean vessels, lake boats, railways, elevating warehouses, flouring mills, and general wharfage should all be in convenient communication with each other. To the proprietors of vessels facilities for loading, unloading, and giving celerity and dispatch, are of greater importance than the mere reduction or the entire removal of tolls.*"

"*The design, therefore, of a terminus should embrace a revision of the whole plan of the Lachine Canal and the Montreal Harbor, with its connections, and the greatest facilities should be given to railways to have access everywhere. It does not follow that Government should go into the building of harbors or railways, or warehouses, or mills; but the adoption of such a plan as has been alluded to, would give a unity to the operations of the various commissions and companies, as well as to individual citizens, and would ensure great economy in the whole conduct of our commerce.*"

With this Report of 1864 and of 1867, in reference to the necessity of some comprehensive plan, it is passing strange, that the enlargement of the Lachine Canal should be decided on, and this make-shift of a new entrance of the canal into the harbor, with 18 feet of water in the lower basin at a place where there can never be a greater width than 275 feet, for 1,300 feet above it should be deemed sufficient, and adopted by the Chief Engineer of the Public Works, as well as by the Government. Mr. Sippell

says that "it is said that there are 30,000 people that derive a subsistence from the mills and factories of the Lachine Canal; the cost of supporting them would be $7,500 per day, to say nothing of the disarrangement of business and loss to the proprietors by shutting off the water for probably three winters." This opinion is endorsed by Mr. Page, the Chief Engineer, who further says that "allowing such a volume of water to be used for mill power on so important a line of navigation, was doubtless in the first instance a mistake, to correct which would now be attended with great expense, and probably cause more damage to the locality than circumstances warrant." Yet, the Chief Engineer, who was, no doubt, fully aware of the Hon. Mr. Chapais' Reports of 1864 and 1867, agreed with him that "an uniform design on a comprehensive terminus for the canal system at Montreal should be adopted, so that ocean vessels, lake boats, railways, elevating warehouses, flouring mills, &c., should all be in convenient communication with each other." In other words the Report of the Public Works Department of Government in 1864 and 1867, embodied the views given to the Harbor Commissioners by Messrs. McAlpine, Kirkwood and Childe, in 1858, and by Mr. Legge, as to the necessity of constructing extensive docks on that "large and naturally available area of shallow water, well protected by the abutment and bank of the Grand Trunk Railway from the swift current and downward flow of river ice, and by enclosing it on two sides, beginning at the Victoria Bridge abutment and running parallel with the high water current about 4,500 feet to a point east of the Windmill Point, thence to the same point about 1,450 feet, an area of about 135 acres could be conveniently secured for harbor purposes." If this space was filled with water to a depth of twenty-five feet, and a lock or locks built to admit the largest vessels or steamers coming through the twenty-five feet channel from Quebec, a dock harbor thus situated would be perfectly safe from water and ice floods, and will fully meet every want: 1st, as a depository for grain, flour, provisions, lumber, &c., and for cargoes of foreign merchandise; 2nd, as a safe place for storage, for ship building, dry docks, and for milling and manufacturing purposes; 3rd, as most convenient for communication with both the river, harbor and Lachine Canal; 4th, as near as practicable to the city, being only seven-eighths of a mile from

the Merchants' Exchange, and of more convenient access by cars, than any erections could be for enclosing the present harbor; 6th, as peculiarly well adapted by absence of currents for bringing the lake or interior vessel side by side with the sea-going vessel for the cheapest transhipment of grain, flour, &c.; and, 7th, for bringing here a large body of water for dock, milling, and manufacturing purposes, which cannot be applied to any other location without costing more than it is worth.

Now, with this statement made by these eminent Engineers, why enlarge the Lachine Canal? It is admitted by Mr. Page, Mr. Sippell, and by every one acquainted with the subject, that the leasing out of the surplus water for mills and manufactories, has made the Lachine Canal merely a mill-race, as the current of the canal runs in many places four and a half to five miles an hour. The estimated cost of its enlargement, through the operations of the land jobbers, will be over $5,638,000, including $1,900,000 for the useless entrance locks at the mouth of the canal. The difference in level between the canal at Lachine and the Harbor of Montreal is forty-four feet. With twenty-five feet of water in the dock below the Bridge, there will only be nineteen feet to overcome between the level in the dock and Lachine, involving only the construction of two locks. *Let the Lachine Canal remain as it is*, and construct a new canal on the banks of the St. Lawrence, in connection with the docks and the lower end of the Lachine Canal. This would give ample accommodation for all classes of vessels, besides providing for dock purposes, as well as for water power for manufacturing, &c.; or, as Mr. Shanly said, "the Lachine Canal, having to serve the trade of both the St. Lawrence and the Ottawa, a different mode of treatment from what may be properly applicable to the other canals in the chain, should, therefore, be contrived a double debt to pay."

Under such a plan there would be no use for the two entrance locks now constructing at a cost of $1,900,000, which even now should be filled up, while the land below Windmill Point should be left as the Harbor Commissioners intended, as a freight station. Ample accommodation for the Grand Trunk Railway could thus be provided outside of the dock, alongside the ocean ship, while the inland vessel could load and discharge in the least possible time with machinery driven by

water power. The same remark would apply to the ocean vessels. A safe winter harbor would thus be provided. Dry docks for building ships could be had to any extent, while the engineers I have named declared to the Harbor Commissioners that the surplus water power would more than three times pay for its cost. The dock is in the harbor; the land is the property of the Commissioners, and the revenue of the harbor is ample for its construction. The canal suggested on the banks of the St. Lawrence would be its feeder, with only nineteen feet of lockage. Under these circumstances should the present Honorable Commissioner of Public Works not hesitate, and before giving out contracts for the enlargement of the present Lachine Canal, cause a survey to be made by competent engineers—especially as the Public Works Department declared, with the sanction of the then Chief Engineer, "*that nowhere is the execution of works on a large scale to effect this object of such paramount importance as at Montreal, owing to the commanding position of this centre of commerce, forming as it does, the connecting link between the ocean and lake shipping, besides being, with the aid of the Victoria Bridge, the great junction of our railway system.*" By the Harbor Commissioners constructing the dock, the Government would only have the navigable feeder to construct, and as the natural beach of the river to 36 feet above high water mark is the property of the public, the expense for land would be light. I have assumed that the outlet of the Lachine Canal at Montreal cannot now be changed, but the outlet through the docks will be a much better outlet than any other, while the Lachine Canal can be connected with the dock at Grant & Hall's Mill, where there is ample space. If such a canal on the St. Lawrence from Lachine into the Docks was carried out, Nun's Island by a dam could be connected with the Victoria Bridge, and a large space of still water enclosed for the timber and other trades.

In 1853, in a communication to the Harbor Commissioners, I said that "I had no doubt a large extension of the present harbor accommodation must be made in the direction of Hochelaga bay. The trade in sawn lumber is rapidly increasing, and when the Montreal and Bytown Railway is constructed and made to pass out of the city by the east end of the mountain. Hochelaga bay must become a large shipping point for sawn lumber, deals, &c.; but, as a winter harbor cannot be constructed there, or

warehouses on the banks of the river, it in no way detracts from the scheme of docks at Point St. Charles." This opinion expressed in 1853 has been more than confirmed, and when the North Shore Railway to Quebec is completed, and the railway extended to Sault St. Marie, and this Sault crossed by a bridge, Minnesota, Wisconsin and other western States will thus be tapped and the produce, and minerals of that region brought by rail to Lachelaga Bay, by a route about 500 miles shorter than any other. The subject is far beyond the interest of either the east or west end of Montreal, as it is one in which the interests of the whole Dominion are concerned, by the saving and cheapening of charges on commerce, and whatever tends to promote the general interest will best conserve all other interests. Familiar as I am with all the advantages and capabilities of the different receiving points on the lakes and the Atlantic—I have no hesitation in declaring that I know of none which possesses the extraordinary advantages which may be made available at Montreal, as a great *entrepôt* for trade, and I cannot help thinking that in view of the vast public and private interests now involved in our canals and railways, it will, erelong, be a matter of regret that the Government of Canada had not sooner taken action in the most comprehensive way, in perfecting our canal system, upon which there has been for many years so much unanimity of mercantile and professional opinion.